



**Hepatitis Awareness Month Observance -
May 2007
and Hepatitis C Update**

Liver disease described as "silent epidemic"

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May is officially observed as Hepatitis Awareness Month in the U.S. During this month, healthcare providers and local health departments are encouraged to focus efforts during this month on hepatitis C, as part of the statewide hepatitis C education, awareness, and information program that was directed by KRS 214.187.

Hepatitis C is a liver disease caused by the hepatitis C virus (HCV). HCV is spread by contact with the blood of an infected person. Approximately 1.6% of Americans have been infected with HCV. Most of these individuals are chronically infected, but may not be aware of their HCV infection because they are not clinically ill.

Education, Awareness, and Information Resources

Local health departments can provide health education and risk reduction information about hepatitis C, in addition to follow-up with a physician to monitor the outcome or progress of the infection. All healthcare providers are encouraged to download, print, and distribute hepatitis C informational materials such as brochures and posters from the CDC Web site at <http://www.cdc.gov/ncicod/diseases/hepatitis/c/index.htm> (under Resource Center click on Order Materials Online, click on Living with Chronic Hepatitis C and Patient Information Card). Additional information about hepatitis C and recommended Web links are listed on the Department for Public Health's Web site, <http://chfs.ky.gov/dph/hepatitis.htm#3>.

Hepatitis C - "The silent epidemic".

Of those persons who test positive for antibody to hepatitis C (anti-HCV), 80% may have no signs or symptoms. Those who do have symptoms may experience sudden fatigue, abdominal pain, nausea or loss of appetite, which might be followed by vomiting, diarrhea, and perhaps dark urine or jaundice.

A blood test for hepatitis C virus infection is recommended for:

- Injecting drug users, even after one time
- Recipients of clotting factors made before 1987
- Hemodialysis patients
- Recipients of blood and/or solid organs before 1992
- People with undiagnosed liver problems
- Infants born to HCV infected mothers
- Healthcare/public safety workers, after a known HCV exposure
- People having sex with multiple partners
- People having sex with an HCV infected steady partner

Additional Information for Individuals with Chronic HCV Infection

Disease due to HCV infection is the leading indication for liver transplant in the U.S. It is estimated that 55%-85% of infected persons will develop chronic infection. Approximately 70% of those

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chronically infected will develop chronic liver disease, and 1%-5% of infected persons with chronic liver disease may die.

Preventive health information after HCV infection should include the following:

1. Avoid alcohol or any other substances which can cause liver damage.
2. Get vaccinated against hepatitis A, if not immune.
3. Protect others from exposure to HCV infected blood and other body fluids with the practice of good hand washing, and do not share personal care items that might have blood on them (e.g., razors or toothbrushes).
4. Exposed sexual partners should be tested for anti-HCV. Use latex condoms with continued sexual intercourse for protection of a partner against infected semen or vaginal secretions.
5. Do not donate blood, organs or tissue.
6. Never share needles or syringes.

Treatment

There is no vaccine available to prevent infection with hepatitis C. Interferon and ribavirin are licensed by the U.S. Food and Drug Administration (FDA) for the treatment of some persons with chronic hepatitis C, but treatment is not always effective. Combination therapy can rid the virus in up to 5 out of 10 persons for genotype 1 and in up to 8 out of 10 persons for genotype 2 and 3. Genotype 1 is the most common HCV genotype in the U.S.

For more information, contact Peggy Dixon or Dr. Robert Brawley, Division of Epidemiology and Health Planning, at (502) 564-3261.

References

CDC. Hepatitis Awareness Month --- May 2006. MMWR 2006;55:18-505. Available at: <http://www.cdc.gov/ncidod/diseases/hepatitis/may.htm>.

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Submit changes of address to:
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Kentucky Enters 7th West Nile Surveillance Season

Public awareness for WNV protection advised
Mike Schardein, MS, Environmental Biologist,
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Epidemiology and Health Planning

As the summer season approaches, the Kentucky Department for Public Health (DPH) reminds residents to protect themselves from mosquito bites that could result in illness such as West Nile virus (WNV). Last year an increase in WNV activity was observed in both Kentucky and surrounding states.

DPH continues to work with local health departments and the Kentucky Department of Agriculture (KDA) to control and aid in WNV surveillance and mosquito control. Testing to identify positive birds, horses, and mosquito pools will continue in order to identify areas of WNV activity.

The Centers for Disease Control and Prevention (CDC) recommends using repellent products that contain the chemical DEET (N, N-diethyl-m-toluamide). Repellent products containing Picaridin and oil of lemon eucalyptus can be used as an alternative to products that contain DEET. According to the CDC, oil of lemon eucalyptus should not be used on children under three years of age. Furthermore, products should be used according to directions printed on product labels.

Use of a veterinary-recommended mosquito and tick repellent on dogs and cats is advised, as they are also susceptible to WNV illness. Manufacturer's directions for use printed on the product should be followed.

DPH advises all Kentuckians to take precautions to avoid mosquitoes and suggests these tips to reduce the risk of becoming infected with WNV:

- Remove all objects in the yard that may lead to the accumulation of standing water, which provides breeding areas for mosquitoes.
- Report all swimming pools that have been ne-

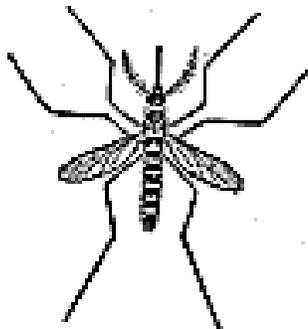
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glected and are in a state of disrepair to local health departments.

- Remember that mosquitoes are most active during dawn and dusk. Wear long-sleeved shirts and long pants when outdoors. Spray clothing with repellents containing permethrin, DEET, picaridin, or oil of lemon eucalyptus, since mosquitoes may bite through thin clothing.
- Apply insect repellent sparingly to exposed skin. Read and follow the manufacturer's directions for use that are printed on the product label.
- Spraying for mosquitoes will be performed by KDA at the request of local governments and health departments. A schedule of the counties where spraying will be performed can be found on the Web at <http://www.kyagr.com> and clicking on the 2007 Mosquito Spraying Schedule.

Further information on WNV activity and state-wide updates are available on the DPH Web site at <http://chfs.gov/dph/epi/westnile.htm> and the CDC Web site at <http://www.cdc.gov/ncidod/dvbid/westnile/>.

The CDC's public response hotline is also available to take questions on WNV at 1-888-246-2675 (English); 1-888-246-2857 (Spanish); and 1-866-874-2646 (TTY).



Correction

In the March 2007 *Epi Notes* edition, the telephone number for requesting the *Sexually Transmitted Diseases Treatment Guidelines, 2006* was incorrectly listed. The correct number is (502) 564-4804. We apologize for any inconveniences this may have caused our readers.

World No Tobacco Day - May 31, 2007

Opportunity to raise awareness concerning tobacco use and exposure

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Activity

Since 1988, the World Health Organization (WHO) and its worldwide partners have celebrated May 31 World No Tobacco Day as an opportunity to raise awareness of the growing and on-going problem of tobacco use and exposure throughout the world. This year, WHO's theme is "Smoke-free Inside" to bring attention to the hundreds of thousands of people who have never smoked yet die each year from diseases caused or exacerbated by breathing second-hand tobacco smoke.

Member states of the WHO created World No Tobacco Day in 1987 to draw global attention to the tobacco epidemic and the preventable death and disease it causes. In 1987, the World Health Assembly (WHA) passed Resolution WHA40.38, calling for April 7, 1988 to be "a world no-smoking day." In 1988, Resolution WHA42.19 passed, calling for the celebration of World No Tobacco Day every year on May 31. The Tobacco Free Initiative (TFI) was established in July 1998 to focus international attention, resources, and action on the global tobacco epidemic.

Based on the overwhelming body of evidence on the harmful effects of secondhand smoke (SHS), the WHO advises:

- Maintaining a 100% smoke-free environment is the only effective strategy to reduce exposure to indoor tobacco smoke to safe levels and to provide an acceptable level of protection from the dangers of SHS exposure. Ventilation and smoking areas, whether or not separately ventilated from non-smoking areas, do not reduce exposure to a safe level of risk and are not recommended.
- Enacting legislation requiring all indoor workplaces and public places to be 100% smoke-free environments. Laws should provide universal and

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equal protection for all. Voluntary policies are not an acceptable response.

- Implementing and enforcing of the law. Passing smoke-free legislation is not enough. Its proper implementation and adequate enforcement require relatively small, but critical efforts and means.
- Implementing educational strategies to reduce SHS exposure in the home. Smoke-free workplace legislation increases the likelihood that people will voluntarily make their homes smoke-free.

Exposure to Secondhand Smoke

Secondhand smoke (also called environmental tobacco smoke or ETS) is similar to the mainstream smoke inhaled by the smoker. It is a complex mixture containing many chemicals, including formaldehyde, cyanide, carbon monoxide, ammonia, and nicotine. Exposure to secondhand smoke causes unintentional and avoidable deaths in the U.S. population from lung cancer and cardiac related illnesses each year. As smoking becomes increasingly restricted in work and public places, adult exposure to tobacco smoke is declining. Children, however, continue to be exposed in their homes to the smoking of their parents and other adults.

Other health risks of exposure to secondhand smoke include:

- Secondhand smoke contains at least 4,000 chemicals, 250 known to be toxic. Within that 250, 69 chemicals will cause cancer either on their own or when paired with other toxic agents.
- Each year in the U.S., secondhand smoke exposure is responsible for 150,000-300,000 new cases of bronchitis and pneumonia in children aged less than 18 months. This results in 7,500 – 15,000 hospitalizations annually.
- There is no risk-free level of secondhand smoke exposure. Even brief exposure can be dangerous.
- Secondhand smoke exposure causes heart disease and lung cancer in nonsmoking adults.
- Nonsmokers who are exposed to secondhand smoke at home or work increase their heart disease risk by 25-30 % and their lung cancer risk by 20-30%.
- Breathing secondhand smoke has immediate

harmful effects on the cardiovascular system, increasing the risk of heart attack. People who already have heart disease are at especially high risk.

- Secondhand smoke exposure causes respiratory symptoms in children and slows lung growth.
- Secondhand smoke may cause sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more frequent and severe asthma attacks in children.

Restrictions on Smoking

Several communities throughout Kentucky have adopted ordinances restricting smoking in public places. Comprehensive ordinances cover all workplaces and enclosed places including restaurants, bars, bowling alleys, bingo halls, and other buildings open to the public, but they do not cover all workplaces (e.g., manufacturing facilities not open to the public). Partial ordinances generally involve multiple exemptions, often excluding bars or restricting smoking based on age or hours of operation. The strongest and most successful ordinances cover all workplaces, enclosed public places, and have very few exceptions.

Currently, thirteen comprehensive ordinances restricting smoking in public places have been passed in Kentucky. Those include Ashland (10/1/06), Elizabethtown (12/1/06), Frankfort (8/22/06), Georgetown (10/1/05), Henderson (10/1/06), Lexington/Fayette Co. (4/27/04), Louisville (10/6/06, as amended), Morehead (8/1/06), Paducah (4/1/07), Paintsville (1/31/07). Counties include: Daviess (1/1/06), Letcher (7/1/06), Oldham (5/1/07 as amended).

Worker Health

Nationally, support for policies prohibiting smoking in indoor workplaces increased from 1993 to 2002; nearly 75% of the respondents were in support of smoke-free workplaces. The lowest levels of support were in the tobacco-producing states. In 1999, Kentucky had the second lowest rate of smoke-free workplace coverage in the nation with only 55.9% of workplaces covered by smoke-free policies.

Regarding environmental tobacco smoke, the 1986 report of the Surgeon General, *The Health Consequences of Involuntary Smoking* reached the following major conclusions:

1. Involuntary smoking is a cause of disease, including lung cancer, in healthy nonsmokers.
2. The children of parents who smoke, compared to the children of nonsmoking parents, have an increased frequency of respiratory infections, increased respiratory symptoms, and smaller rates of increase in lung function as the lung matures.
3. Simple separation of smokers and nonsmokers within the same air space may reduce, but does not eliminate, exposure of nonsmokers to environmental tobacco smoke.

The health risks of exposure to SHS were further solidified in the 2006 Surgeon General's report *The Health Consequences of Involuntary Exposure to Tobacco Smoke*. The report also concluded that establishing smoke-free workplaces is the only effective way to ensure that secondhand smoke exposure does not occur in the workplace. A recent study found that patrons who had spent four hours in a casino where smoking was allowed experienced statistically significant increases in 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol, a tobacco-specific lung carcinogen. The study concluded that exposure of a nonsmoker to secondhand smoke in a casino results in uptake of this carcinogen. This finding has implications for employees who are likely to spend significantly more time than patrons in these environments. The authors noted that on the basis of their results and other studies, one would expect that carcinogen levels in nonsmoking casino employees would increase as a result of ETS exposure at their worksite. As noted earlier, not all smoking ordinances cover private workplaces¹. However, there is a growing tendency to view smoke-free policies in light of worker protection and workplace safety rather than as measures designed primarily to protect patrons. While some employers have been required to implement workplace smoking restrictions in response to local ordinances, other employers have chosen to implement voluntary workplace smoking restrictions. These business owners are finding these restrictions help protect their employees' health, increase pro-

ductivity, reduce health care or other insurance costs, reduce maintenance/cleaning costs, or lessen legal liability for employee health conditions.

Air Quality

In the fall of 2003, the Lexington/Fayette Urban County Government (LFUCG) passed Kentucky's first ordinance restricting smoking. After appeals to the Kentucky Supreme Court, ordinance enforcement began in April 2004. Lexington's smoke-free ordinance restricts smoking in most public places including, but not limited to, restaurants, bars, bowling alleys, bingo halls, convenience stores, laundromats, and other public businesses.

Prior to implementation, researchers from the University of Kentucky's College of Nursing conducted a study that in part was to investigate the impact of the smoke-free ordinance on indoor air quality. Air samples from ten commercial locations throughout Lexington were obtained (three restaurants, three bars, four other venues including two music clubs, a bowling alley, and a coffee house). In September 2004, six months after enforcement began, air samples were obtained from the same sample locations. Measurement in one location was excluded because of apparent smoking after the ordinance was implemented.

Indoor air pollution dropped 91% after the smoke-free law in the remaining nine locations, indicating significant improvement in air quality. Study researchers found that while the measurement of actual improvement in respiratory and/or cardiac health was beyond the scope of the study, there was empirical evidence that smoke-free laws not only improve air quality, but also lead to better health outcomes.

References

1. US Dept. of Health and Human Svcs, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*. Atlanta, GA: CDC, Coord. Ctr for Health Promotion, Nat. Ctr for Chronic Disease Prev and Health Promotion, Office on Smoking and Health, 2006.

Additional references will be furnished upon request.

**HIV Vaccine Awareness Day
Observed May 18**

Support for HIV vaccine needed

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May 18 is observed as the 9th annual HIV Vaccine Awareness Day in order to salute researchers, trial participants, health professionals, and volunteers who work together in hopes of developing successful HIV vaccines. It is also a day to advocate for HIV vaccine development, educate communities about the research being conducted, and foster community participation in vaccine research and trials.

AIDS has killed over 22 million persons and infected an estimated 40 million people worldwide. Each day, over 14,000 new HIV infections occur worldwide. So far, more than 500,000 persons in the U.S. have died of AIDS and over 1 million U.S. residents are estimated to be living with the virus. From 1982 to 2006, AIDS killed 1,942 Kentucky citizens, and as of December 31, 2006, there were 4,505 cumulative AIDS case reported in the state; 2,563 of these are reported as still living. There is no cure for AIDS, but the development of antiretroviral therapy in the early 1990s has allowed for the slowing of disease progression in infected persons, hence reducing the number of deaths due to AIDS. However, these medications are often very expensive and most have serious side effects. Furthermore, they require stringent adherence to treatment regimens, the lapse of which could result in the development of drug resistant HIV strains. One of the most effective means of containing and stopping this raging epidemic is for scientists to develop safe and affordable HIV vaccines that are effective in protecting all uninfected persons from becoming infected. Since 1983 when HIV was discovered as the cause of AIDS, researchers have been trying to develop a vaccine to prevent the disease. Even though a vaccine is not yet available, more than 30 preventive HIV/AIDS vaccines are currently being tested in clinical trials in more than 20 countries. As of 2006, the National Institute of Allergy and Infectious Diseases (NIAID), located within the National Institutes of Health (NIH), reported enroll-

ing more than 23,000 volunteers in 96 HIV vaccine clinical trials that tested at least 58 different therapeutic and preventive vaccine candidates.

The virus's ability to replicate into a billion copies of itself during initial infection and mutate its genealogical structure in the process makes it difficult to develop a vaccine that can generate an effective immunological response against HIV. In addition, HIV is a retrovirus, a group of viruses that were only discovered in the late 20th century and thus are not yet well understood. Despite all these hurdles, scientists have made great strides in HIV vaccine research and development. Currently, the two types of HIV vaccines under various phases of development and trial include preventive and therapeutic vaccines. Preventive vaccines are given to uninfected persons to protect them from being infected in the event of future exposure to the virus. Therapeutic vaccines are used to slow disease progression in already infected persons. It is estimated that the first vaccines could possibly be licensed for use in the U.S. within the next 10 years.

Many HIV experts argue that even if a preventive vaccine or a cure were discovered, it might be decades before full eradication of the AIDS epidemic could be achieved, because there are many underlying factors. These factors include: poverty; religious beliefs and practices; societal norms; power imbalance; historical and institutionalized racism; discrimination; lack of access to adequate health-care; poor health practices; negative attitudes towards condom use; high incarceration rates (AIDS prevalence in prisons is 3 times more than in the general population); denial; pronounced homophobia; and AIDS-related stigma that render one group more vulnerable to HIV infection than others. Eradicating the epidemic will thus require addressing these often hard to overcome factors.

Also, for safe and effective vaccines to be developed, researchers must be able to attract trial volunteers from vulnerable groups that are highest at risk for HIV infection. Many of these socially and economically disadvantaged groups, such as injection drug users, Men Who Have Sex with Men (MSM), and racial and ethnic minorities have been tradi-

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tionally hard to access. For example, in the African American community, mistrust of the medical community and beliefs about the public health systems due to historical incidents such as the Tuskegee Syphilis Study influence the "health seeking behavior" of many African Americans. The mistrust also poses barriers to HIV-AIDS research, prevention, and treatment. Additionally, the underlying factors mentioned previously work to prevent vulnerable populations from participating in clinical trials and other HIV-AIDS initiatives. To be successful, vaccines must be tested among such groups who are expected to be the main end-users. For this reason, and to ensure that their greatest concerns are addressed, the communities that are most impacted by AIDS must get involved in all aspects of HIV vaccine research.

At the beginning of the AIDS epidemic, the majority of those impacted were gay white males. Today, its greatest impact is among vulnerable racial and ethnic minorities. In Kentucky, as well as nationally, certain populations within African American and Latino communities, especially women, youth, MSM, the incarcerated, and injection drug users are being increasingly affected. In 2005, African Americans represented about 50% of the nation's diagnosed AIDS cases, 59% of AIDS cases in children under 13 years of age, 60% of AIDS cases in women. HIV-AIDS was the leading cause of death for African American women aged 25-34 years. Nationally, Hispanics represented about 19% of all diagnosed cases in 2005, 23% of AIDS cases in children under 13 years of age, and 19% of the cases in women. About 31% of Kentucky's reported AIDS cases are African American and 3% are Hispanic. These numbers on their own might not seem very daunting until one considers the fact that African Americans make up only 13% of the U.S. population and 7.5% of the Kentucky population while Latinos make up 14% and 2% respectively. Hence, the extent to which not only HIV vaccine development, but all responses to the AIDS epidemic are successful depends on greater involvement, input, and effort from these disproportionately impacted communities. It also requires a commitment by state and local health departments, federal agencies, policy makers, non-governmental

organizations, and AIDS service organizations to respond to the AIDS crisis in such devastatingly impacted groups.

The Kentucky Department for Public Health's HIV-AIDS branch is diligently working to promote heightened community response and involvement in various aspects of the fight against HIV-AIDS, including participation in HIV vaccine research and clinical trials. The department's Kentucky HIV-AIDS Planning and Advisory Council (KHPAC) is currently conducting member training and community outreach activities aimed at eliciting greater minority participation in the group's planning activities for AIDS prevention, service and treatment provision, and recommendations to policy makers. Additionally, the branch partners with other government agencies, community leaders, community based organizations, AIDS service organizations, medical providers, and local organizations, as well as local health departments, to provide various community awareness events aimed at mobilizing greater community action. To foster a concerted, committed, and continuous response from all stakeholders, the branch provides various training and educational opportunities including three annual conferences that are being held in Lexington this year. This year's annual statewide HIV/AIDS conference will be held from May 9 -10, 2007 and will specifically target a variety of professional and community stakeholders such as healthcare providers, prevention specialists, social service specialists, health education specialists, corrections officers, mental health and mental retardation specialists, substance abuse counselors, community members, and others affected by HIV/AIDS. The annual Youth Conference on HIV-AIDS will be held in June 2007 to educate and hold discussions with 18 to 24 year-olds and their parents about HIV and AIDS issues impacting youth. The third conference is the annual African American and Latino Leadership Conference on AIDS, which will be held from September 6-8, 2007 to provide education to leaders from all segments of the African American and Hispanic communities so that they can motivate the mobilization of their community members to participate in initiatives against the HIV-AIDS epidemic.

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The HIV-AIDS branch recognizes that in order to succeed in any aspect of the fight against HIV-AIDS, there must be collaborations among all stakeholders and a concerted community involvement. It is for this reason that during the upcoming HIV Vaccine Awareness Day, support is needed for participation in all aspects of vaccine research and trials. Successful development of HIV vaccines that are effective for all populations highly depends on active involvement by all stakeholders, especially community members. In response to the 9th HIV Vaccine Awareness Day, the Kentucky HIV-AIDS Branch supports the NIAID request that individuals learn more about HIV vaccine research and educate others about the need for HIV vaccine.

For more information on HIV Vaccine Awareness Day, upcoming events, and how to conduct activities in your community, visit the NIAID Web site at: <http://www3.niaid.nih.gov/news/events/HVAD/>. To find out how to participate in HIV vaccine trials, visit <http://www.bethegeneration.org>. To learn about HIV-AIDS initiatives in Kentucky, call the Kentucky Department for Public Health's HIV/AIDS Branch at (502) 564-6539 or visit the Web site at <http://chfs.ky.gov/dph/epi/hiv aids.htm>.